

AMENDMENTS TO THE SPECIFICATION

Please amend the specification as follows:

[0005] The authors have also shown that fusion proteins between the Gb3 receptor-binding non toxic B-fragment of bacterial Shiga toxin derived from *Shigella dysenteriae dysenteriae* and an antigen, or an epitope from a model tumor antigen, can elicit specific cytotoxic T lymphocytes response (CTL), whereas each moiety of said fusion protein does not lead individually to CTL induction (1,2, and WO 99/03881).

Please amend paragraph [0056] as follows: [0056] primer A': "5'-
CACTACTAGTTTACG-3' primer A': primer ShigaAtpE "5'-
CACTACTACGTTTAAC-3' (SEQ ID no 5), and.

Please amend paragraph [0068] as follows:

[0068] The present invention also provides a method for delivering a sequence of interest into the ~~MHC~~ MHC class I pathway using a product obtained by covalent binding of the Cys moiety of the universal carrier with said sequence of interest; this method is advantageous to elicit a CTL response to a given antigen or epitope thereof as far as the product is specific to the cell involved in the MHC class I pathway.

Please amend paragraph [0081] as follows:

[0081] FIG. 2a represents ~~th~~ the coupling of Type2 of Pep2 [as defined in example 2] to STxB-Cys, followed by an in vitro antigen presentation assay on D1 dendritic cells, as described in (2). Two different preparations of STxB-Cys coupled to the SL8 peptide, an immunodominant epitope of ovalbumin were used (termed 4A an 9A). Upon fixation, antigen presentation is abolished showing that no extracellular processing occurred.

[0089] FIG. 9 shows MHC class I and II restricted antigen presentation induced by incubation of D1 cells with STxB-Cys-Ova. See text for details.

Please amend paragraph [0091] as follows:

[0091] In a preferred embodiment, the plasmid pSU108 (7) was modified to introduce the Cysteine codon tgt at the 3' end of the B-fragment cDNA. PCR primer A: SEQ ID no 3 (5'-
AGCGMGTATTTTCGTTGACTGAGAATAGCTC-3') (5'-
AGCGAAGTTATTTTCGTTGACTCAGAATAGCTC-3') and primer A': SEQ ID no 4 (5'-GAGCTATTCTGAGTCAACACGAAAAATACTTC-3') (5'-GAGCTATTCTGAGTCAACACGAAAAATACTTC-3') were used with plasmid specific primers ShigaAtpE: SEQ ID no 5 (5'-CACTACTAGGTTTMC-3') (5'-CACTACTACGTTAAC-3') and Shiga-fd: SEQ ID no 6 (5'-CGGCGCAACTATCGG-3') to produce DNA fragments which, in a second PCR with primers Shiga AtpE and Shiga-fd yielded a fragment that was cloned into the SphI and SalI restriction sites of pSU108. Sequences derived by PCR were verified by dideoxy-sequencing.

Please amend paragraph [0139] as follows:

[0139] Our preliminary evidence suggests that chicken ovalbumin can be coupled to STxB-Cys. These experiments have been done with the SPDP heterobifunctional cross-linker. (Carlsson *et al.*, 1978).

Please amend paragraph [0148] as follows:

[0148] 0.5 μ M of STxB-Cys-Ova was incubated with HeLa cells on ice. The cells were washed and shifted to 37° C. for 45 min, fixed, and stained for the indicated antibodies. As shown in FIG. 8, when STxB-Cys and Ova were linked by MBS, Ova immunoreactivity could be detected together with STxB immunoreactivity in the Golgi apparatus, stained by Rab6. When both proteins are incubated as separate entities with HeLa cells, only STxB-Cys is transported to the Golgi, while Ova cannot be detected on the cells. These data clearly show that couples STxB-Cys is still transported in the same manner as uncoupled STxB-Cys, and that Ova is vectorized via STxB-Cys.

Please amend paragraph [150] as follows:

[0150] In a second experiment, we have pulsed the same D1 dendritic H2^b restricted cell line with either Ova alone or with STxB-Cys-Ova. No presentation of the Ova-derived immunodominant SL8 peptide (Ova₂₅₇₋₂₆₄) was observed when the D1 cells were sensitized with up to 100nM of free Ova, while 1-10 nM of STxB-Cys-Ova allowed the presentation of the SL8 peptide, as revealed by the specific B3Z hybridoma that ~~recognize~~ recognize the SL8 peptide in the context of K^b molecules. As a control, it was shown that no activation of an irrelevant hybridoma was observed under the same experimental conditions.